

Second Response

Application Serial No.: 10/083,751

Filed: February 25, 2002

REMARKS

Claims 3 and 5 are amended to define the present inventions in greater detail. Claims 1 and 2 were previously cancelled. Claim 4 was withdrawn from further consideration in this application, as being drawn to a non-elected invention. Claims 3, 4, 5 and 6 remain, with Claim 4 withdrawn from further consideration, and with Claim 6 indicated as allowable.

The Applicants respectfully re-submit a new substitute abstract in response to the Examiner's objection. The Applicants submit that the amended Abstract complies with the requirements.

Claim 5 stands rejected as anticipated by U.S. Patent No. 5,204,574 to Kanno et al. ("*Kanno*"). This rejection is respectfully traversed, as possibly applied to amended Claim 5.

Amended Claim 5 recites that each of the segments comprises a hook extending from a first end, a groove and one or more anchors, the groove and the anchors being extended from a second end of the segment opposite to the first end and being ended close to the first end by an end step and end edges respectively. The groove, the end step of the groove, the anchors and the end edges of the grooves are embedded in a mold resin so as to ensure the fixation of the segment to a mold resin. The groove and the anchors resist a force in a lateral direction and the end step of the groove and the end edges of the anchors resist a force in a longitudinal direction. *Kanno* fails to disclose the groove and the anchors being extended from a second end of the segment opposite to the first end and being ended close to the first end by a step and edges respectively. According to *Kanno*'s Fig. 8, the anchors 18A, 18B and the grooves 19A, 19B are extended from one end to the other end of the segment 10, and thus not ended by a step and edges. The segment of *Kanno* is provided

Second Response

Application Serial No.: 10/083,751

Filed: February 25, 2002

with other grooves 23A, 23B and a recess 21 to be embedded in a mold resin, instead of the end step and the end edges, so as to resist a force in a longitudinal direction. Such structures are formed by troublesome steps indicated in Figs. 10-15 of *Kanno*. The present invention as defined in amended Claim 5 omits such complex structures without losing resistance to force in the longitudinal direction. Accordingly, *Kanno* does not anticipate amended Claim 5.

Claim 3 stands rejected as unpatentable over *Kanno* in view of U.S. Patent No. 6,369,484 to Kageyama et al. ("*Kageyama*"). The Applicants traverse this rejection, as possibly applied to amended Claim 3.

Claim 3 is amended to define that the second anchors are respectively projected inward from a proximal end of the hook. The second anchors are formed by dividing hooks so that they are formed relatively long, thus the second anchors are solidly fixed to the mold resin. Even though the anchors defined in amended Claim 5 are not extended to the vicinity of the hooks, the second anchors ensure the fixation in the vicinity of the hooks. Therefore, the anchors defined in amended Claim 5 and the second anchors defined in amended Claim 3 cooperatively ensure the fixation of the segments and the mold resin. Both *Kanno* and *Kageyama* completely fail to disclose the second anchors projected inward from the proximal ends of the hooks. The anchors disclosed by *Kageyama* occupy certain areas of the inner surfaces of the commutator segments, and thus, the anchors disclosed by *Kanno* can not be formed in the vicinity of the hooks as consistently with the first anchors of *Kageyama*. It is not easy for those skilled in the art to modify the art disclosed in *Kanno* and combine it to the commutator disclosed in *Kageyama* in order to reach amended Claim 3. Accordingly, the structural combinations recited in amended Claim 3 would not have been obvious to one of ordinary skill from the cited references, at the time the present applicants made the claimed invention.

Second Response

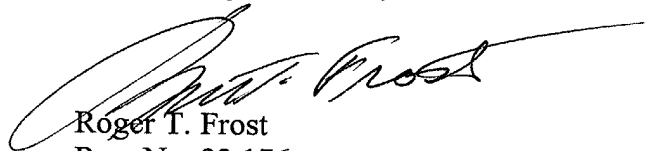
Application Serial No.: 10/083,751

Filed: February 25, 2002

Furthermore, since amended Claim 3 depends on amended Claim 5, amended Claim 3 should also be in condition for allowance if amended Claim 5 is allowable.

The foregoing is submitted as a complete response to the Office Action identified above. The Applicants submit that Claims 3 and 5 are patentable over the art of record, and solicit a notice of allowance to those claims as well as to Claim 6 previously allowed in substance.

Respectfully submitted,



Roger T. Frost

Reg. No. 22,176

KILPATRICK STOCKTON LLP
Suite 2800
1100 Peachtree Street
Atlanta, Georgia 30309-4530
Telephone: 404-815-6500
Attorney Docket No.: 44471/270726 (13700)